REMARKS

Claims 1-30, 32-33, and 35-39 are pending. Claims 1, 10, 17, 21, 27, 32, 33, 36, and 38 are independent.

In the action mailed December 4, 2006, claims 38-39 were rejected under 35 U.S.C. § 101, first paragraph as allegedly being directed to non-statutory subject matter. In particular, the rejection contends that machine logic tangibly embodied in hardware does "not fall into any category of statutory subject matter."

Applicant respectfully disagrees. Under the provisions of 35 U.S.C. § 101, whoever invents or discovers any new and useful machine or manufacture, or any new and useful improvement thereof, may obtain a patent therefor. Applicant respectfully submits that machine logic tangibly embodied in hardware is both a machine and a manufacture.

Accordingly, claims 38-39 recite patentable subject matter. Applicant thus asks that the rejections of claims 38-39 be withdrawn.

Claim 1

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,891,832 to Chien et al. (hereinafter "Chien").

Claim 1 relates to a method that includes sending a data packet along a path from a first network point to a second network point, along the path, generating fragment packets from the data packet, receiving at least one of the fragment packets at the second network point, analyzing the size of at least one of the received fragment packets and comparing the size to a maximum packet size, and depending on a result of the analysis, re-setting the maximum packet size based on the size of the at least one of the fragment packets.

As an anticipation rejection, claim 1 contends that Chien describes the analysis of the size of at least one fragment packet that has been generated along a path from a first network point to a second network point. Applicant respectfully disagrees.

In this regard, Chien deals with adaptive fragmentation techniques for data networks. *See, e.g., Chien*, col. 1, line 7-9. According to Chien, fragmentation can be used to fragment long data packets into a sequence of shorter frames to control delay and delay variation. *Id.*, col. 2, line 59-63. According to Chien, adaptive fragmentation can implement automatic and dynamic reconfiguration of fragmentation parameters. *Id.*, col. 5, line 11-15. Among the parameters identified by Chien are the

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maximum fragmentation size (MAX_FRAG_SIZE) and whether or not fragmentation is enabled or disabled. *Id. See also* col. 3, line 14-18. Thus, Chien considers enabling or disabling fragmentation to constitute "adaptive fragmentation." Chien reconfigures such fragmentation parameters based on "at least one condition on a selected link." *Id.*, col. 3, line 43-45.

Chien **never** uses the size of a fragment packet that has been generated along a path from a first network point to a second network point as the "at least one condition on a selected link." For example, in Adaptive Fragmentation Procedure A 200 (FIG. 2), Chien describes that whether the received packet "is associated with real-time traffic or a non-real-time traffic" is used as the basis for reconfiguring fragmentation parameters. *Id.*, col. 5, line 35-41; FIG. 2, element 204. As another example, in Adaptive Fragmentation Procedure B 300 (FIG. 3), fragmentation is enabled or disabled based upon the presence or absence of real-time sessions on a particular link. *Id.*, col. 7, line 13-16; FIG. 3, element 304.

The rejection points to Chien's Adaptive Fragmentation Procedure C 400 (FIG. 4) as allegedly describing the analysis of the size of at least one fragment packet that has been generated along a path from a first network point to a second network

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point.   However, Adaptive Fragmentation Procedure C 400

describes nothing of the sort.   Instead, Adaptive Fragmentation

Procedure C 400 also uses a determination of whether a received

packet corresponds to a real-time packet as a basis for

"adapting" fragmentation to be enabled or disabled.   *Id.*, col.

10, line 18-22; FIG. 4, element 404.

In addition to the determination of whether a received

packet corresponds to a real-time packet, Chien also describes

that another parameter is considered when determining whether

fragmentation is enabled or disabled.   In particular, the

FRAG_SIZE value of a node can be gradually increased for each

time interval in which no real-time traffic is present on that

link.   *Id.*, col. 9, line 15-20.   When the FRAG_SIZE value

reaches the maximum transmission unit (MTU) size for that link,

"fragmentation is effectively disabled" on that link.   *Id.*, col.

9, line 20-22.   Thus, unlike Adaptive Fragmentation Procedure A

200 which effectively disables fragmentation like a switch

(after a set period), Adaptive Fragmentation Procedure C 400

"gradually decreases the use of fragmentation on a particular

link over time so long as no real-time traffic is detected."

Id., col. 9, line 6-15.

Applicant respectfully submits that neither the determination of whether a received packet corresponds to a real-time packet nor a determination whether the FRAG_SIZE value has reached the maximum transmission unit (MTU) size for that link describes or suggests an analysis of the size of at least one fragment packet that has been generated along a path from a first network point to a second network point, as recited in claim 1. Whether a packet is real time or not does not correspond to the packet's size. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and does not correspond to the size of at least one fragment packet that has been generated along a path from a first network point to that node.

Moreover, claim 1 has been amended to recite that the size of at least one of the fragment packets received at a second network point is compared to a maximum packet size. No such comparison is described or suggested by Chien.

Accordingly, claim 1 is not anticipated by Chien. Applicant thus requests that the rejections of claim 1 and the claims dependent therefrom be withdrawn.

Claim 10

Claim 10 was rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 10 relates to a method that includes determining, at a receiving point, a size of a data packet transmitted over a network path from a sending point to the receiving point and resetting a maximum data packet size of the network path from the sending point to the receiving point based on the determined size of the data packet transmitted over the network path.

Chien neither describes nor suggests that the size of a data packet transmitted over a network path is determined at a receiving point or that the maximum data packet size of the network path is reset based on the determined size, as recited in claim 10.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never uses a size of a data packet transmitted over a network path as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not indicate anything about the packet's size. The

FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and does not correspond to the size of a data packet transmitted over a network path, as recited in claim 10.

Since Chien's adaptive fragmentation techniques do not determine the size of a data packet transmitted over a network path for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest that the maximum data packet size of the network path is reset based on the determined size.

Accordingly, claim 10 is not anticipated by Chien. Applicant thus requests that the rejections of claim 10 and the claims dependent therefrom be withdrawn.

Claim 17

Claim 17 was rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 17 relates to a method that includes sending a data message along a network path from a sending point to a receiving point, determining the size of at least a fragment of the data message at the receiving point, and based on the determination, adjusting a maximum packet size between sending and receiving points.

Chien neither describes nor suggests determining the size of at least a fragment of a data message, and based on the determination, adjusting a maximum packet size, as recited in claim 17.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never use a size of at least a fragment of a data message as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not correspond to a size of at least a fragment of a data message. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and also does not correspond to a size of at least a fragment of a data message, as recited in claim 17.

Since Chien's adaptive fragmentation techniques do not determine a size of at least a fragment of a data message for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest adjusting a maximum packet size between sending and receiving points based on such a determination.

Claim 17 is thus not anticipated by Chien. Applicant thus requests that the rejections of claim 17 and the claims dependent therefrom be withdrawn.

Claim 21

Claim 21 was rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 21 relates to a method for determining a maximum packet size of a network path. The method includes sending a data packet along the network path to a receiving node, receiving a response from the receiving node, and setting the maximum packet size of the network path based on the response. The response from the receiving node includes information determined based on a size of a fragment of the data packet. The fragment was formed along the network path.

Chien neither describes nor suggests receiving a response from a receiving node that includes information determined based on a size of a fragment of a data packet, much less setting a maximum packet size of a network path based on the response, as recited in claim 21.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never use a size of a fragment of a data packet as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not indicate anything about a size of a fragment of a data packet. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and also does not correspond to a size of a fragment of a data packet, as recited in claim 21.

Since Chien's adaptive fragmentation techniques do not determine a size of a fragment of a data packet for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest receiving a response from a receiving node that includes information determined based on a size of a fragment of a data packet, much less setting a maximum packet size of a network path based on the response, as recited in claim 21.

Claim 21 is thus not anticipated by Chien. Applicant thus
requests that the rejections of claim 21 and the claims
dependent therefrom be withdrawn.

Claim 27

Claim 27 was rejected under 35 U.S.C. § 102(e) as
anticipated by Chien.

Claim 27 relates to a method that includes sending a data
packet on a path from a first network point to a second network
point, along the path, generating fragment packets from the data
packet, receiving at least one of the fragment packets at the
second network point, and analyzing a size of at least one of
the received fragment packets to determine a path maximum packet
size.

Chien neither describes nor suggests analyzing a size of at
least one fragment packet generated from a data packet along a
path from a first network point to a second network point to
determine a path maximum packet size, as recited in claim 27.

In this regard, as discussed above, Chien's adaptive
fragmentation techniques never use a size of at least one
fragment packet as the basis for reconfiguring fragmentation
parameters. Instead, Chien uses conditions such as the presence
or absence of real-time sessions and whether the FRAG_SIZE value

on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not indicate anything about a size of at least one fragment packet. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and also does not correspond to a size of at least one fragment packet, as recited in claim 27.

Since Chien's adaptive fragmentation techniques do not analyze a size of at least one fragment packet for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest analyzing such a size to determine a path maximum packet size, as recited in claim 27.

Moreover, claim 27 has been amended to recite that it is the size of at least one of the received fragment packets that is analyzed. No such analysis is described or suggested by Chien.

Claim 27 is thus not anticipated by Chien. Applicant thus requests that the rejections of claim 27 and the claims dependent therefrom be withdrawn.

Claim 32

Claim 32 was rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 32 relates to a method that includes sending a data packet along a network path, fragmenting the packet into fragments, receiving at least one of the fragment at a second network point, and analyzing the size of one or more of the received fragments to determine the maximum packet size of the path. The data packet is larger than the maximum packet size of the network path.

Chien neither describes nor suggests analyzing a size of one or more fragments of a data packet sent along a network path to determine the maximum packet size of the path, as recited in claim 32.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never use the size of one or more fragments of a data packet as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not indicate anything about the size of one or more

fragments of a data packet. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and also does not correspond to the size of one or more fragments of a data packet, as recited in claim 32.

Since Chien's adaptive fragmentation techniques do not analyze a size of one or more fragments of a data packet for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest analyzing such a size to determine the maximum packet size of a path, as recited in claim 32.

Moreover, claim 32 has been amended to recite that the size of one or more received fragments of a data packet is analyzed. No such analysis is described or suggested by Chien.

Claim 32 is thus not anticipated by Chien. Applicant thus requests that the rejections of claim 32 and the claims dependent therefrom be withdrawn.

Claim 33

Claim 33 was rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 33 relates to a method that includes sending a message along a network path, fragmenting the message into fragments, at a receiving point, measuring the size of the largest fragment, and communicating the size of the largest fragment to a sending point. The path includes sections, each having a maximum message size to limit the size of messages passing through it. The message is larger than the smallest maximum message size of the sections. The fragments are at least as small as the smallest maximum message size.

Chien neither describes nor suggests measuring a size of a largest fragment of a message sent along a network path at a receiving point or communicating the measured size of the largest fragment to a sending point, as recited in claim 33.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never use a size of a largest fragment of a message as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not correspond to a size of a largest fragment of a message. The FRAG_SIZE value is an internal value of the node that performs

Adaptive Fragmentation Procedure C 400 and also does not correspond to a size of a largest fragment of a message, as recited in claim 33.

Since Chien's adaptive fragmentation techniques do not measuring a size of a largest fragment of a message sent along a network path at a receiving point, Chien also fails to describe or suggest communicating the measured size of the largest fragment to a sending point, as recited in claim 33.

Claim 33 is thus not anticipated by Chien. Applicant thus requests that the rejections of claim 33 and the claims dependent therefrom be withdrawn.

<u>Claims 36 and 38</u>

Claims 36 and 38 were rejected under 35 U.S.C. § 102(e) as anticipated by Chien.

Claim 36 relates to a computer program embodied in a computer readable medium. The program is capable of configuring a computer to send a data packet along a path from a first network point to a second network point, along the path, generate fragment packets from the data packet, analyze the size of at least one of the fragment packets, and depending on a result of the analysis, re-set a maximum packet size based on the size of the one of the fragment packets.

Claim 38 relates to machine logic tangibly embodied in hardware capable of performing operations. The operations are comparable to those performed in claim 36.

Chien neither describes nor suggests analysis of a size of at least one fragment packet and re-set of a maximum packet size based on the size, as recited in claims 36 and 38.

In this regard, as discussed above, Chien's adaptive fragmentation techniques never use a size of at least one fragment packet as the basis for reconfiguring fragmentation parameters. Instead, Chien uses conditions such as the presence or absence of real-time sessions and whether the FRAG_SIZE value on a link has reached the maximum transmission unit (MTU) size for that link. Whether a packet is real time or not does not correspond to a size of at least one fragment packet. The FRAG_SIZE value is an internal value of the node that performs Adaptive Fragmentation Procedure C 400 and also does not correspond to a size of at least one fragment packet, as recited in claims 36 and 38.

Since Chien's adaptive fragmentation techniques do not analyze a size of at least one fragment packet for use as the basis for reconfiguring fragmentation parameters, Chien also fails to describe or suggest analyzing such a size to determine a path maximum packet size, as recited in claims 36 and 38.
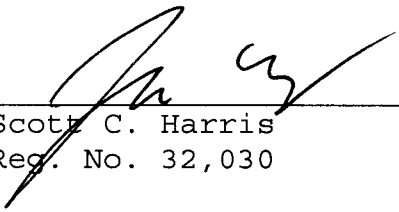
Claims 36 and 38 are thus not anticipated by Chien. Applicant therefore requests that the rejections of claims 36, 38, and the claims dependent therefrom be withdrawn.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant asks that all claims be allowed. No fees are believed due at this time. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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